

REMARKS

Applicant appreciates the Examiner's thorough consideration provided the present application. Claims 1, 7, 9, 11, 12, 15, 16, 23, 24, 27, 29, 36, 37, 44 and 47-51 are now present in the application. Claims 1 and 29 have been amended. Claims 1 and 29 are independent. Reconsideration of this application, as amended, is respectfully requested.

Claim Objection

Claims 1 and 29 have been objected to due to the terms "filter" in claim 1 and "filtering" in claim 29. Applicant respectfully disagrees.

In particular, the specification as originally filed on page 17, lines 6-15 discloses:

The first light beam 12 emitted from the laser is transmitted through a focusing lens 10 and a dichroic filter 9 to a dichroic beam-splitter 6. This beam-splitter 6 serves two purposes, first to reflect the first light beam 12 towards the specimen 14, and second to *filter and direct resultant light 15 emitted from the specimen 14 towards a photo-multiplier 1*. The resultant light 15 may comprise a light component originating from a reflected portion of the first light beam 12 and a *fluorescent light component emitted from fluorescent target objects* (not shown) contained in the specimen 14. The dichroic beam-splitter 6 and the dichroic filter 4 both contribute to attenuate the light component originating from the laser source (not shown), thereby enhancing the signal to noise ratio of light transmitted to the photo-multiplier 1. (Emphasis added.)

In addition, a filter (any kind of optical or in general electromagnetic filter) always suppresses some wavelength and passes other wavelength as may be found for example in Webster's Encyclopedic Unabridged Dictionary of the English Language:

Filter - ... 6. Physics. - A device that *selectively* damps oscillations of certain frequencies, while not affecting oscillations of other frequencies. (Emphasis added.)

Therefore, it is clear that the fluorescent light emitted from the marked objects is *filtered by stopping any light component of the light* originating from the light source and being reflected from the specimen, thereby relatively increasing the proportion of the fluorescent light from the marked objects, since this light passes through the filter. Accordingly, Reconsideration and withdrawal of these objections are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 7, 9, 11, 12, 23, 24, 27, 29, 36, 37 and 47-49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Malin, U.S. Patent No. 5,377,002, in view of Hamashima (U.S. Patent No. 4,744,663). Claims 15, 16, 50 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Malin in view of Hamashima, and further in view of Worster (U.S. Patent No. 5,479,252). Claim 44 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Malin in view of Raz (U.S. Patent No. 6,049,421).

In light of the foregoing amendments, Applicant respectfully submits that these rejections have been obviated and/or rendered moot. As the Examiner will note, independent claims 1 and 29 have been amended.

Independent claim 1 now recites "at least one beam-splitter being arranged to reflect the first light beam towards the specimen and filter light emitted from the specimen, thereby allowing fluorescent light from the marked objects to pass through the beam-splitter to the detector."

Independent claim 29 now recites “filtering through said beam-splitter light emitted from the specimen, passing fluorescent light from the marked objects through the beam-splitter towards the detector”

Support for the amendments to claims 1 and 29 can be found on page 17, line 6-15 of the specification and in FIG. 1 as originally filed. Applicant respectfully submits that the above combinations of elements and steps as set forth in amended independent claims 1 and 29 are not disclosed nor suggested by the references relied on by the Examiner.

As already explained in the Amendment dated in November 2007, Malin discloses an apparatus for detecting surface defects by emitting the light towards the surface and examining light scattering back from the surface. However, no fluorescent light is emitted from the surface in Malin. Therefore, Malin does not relate to detection of fluorescent light, and cannot identify a position of a fluorescently marked object as recited in claims 1 and 29.

On the other hand, Hamashima discloses two different systems: (i) detection of edges by detection of light scattering back similar to Malin, and (ii) detection of fluorescence from a pattern incorporated in a wafer. These two systems are incorporated in one apparatus, but use separate light sources and separate detectors, *i.e.*, the light source 10 and the detector 36 and the light source 62 and the detector 60, respectively. Therefore, the combination of Malin and Hamashima simply teaches that detection of fluorescence and detection of scattering are performed in *two different systems*. Accordingly, one skilled in the art would not incorporate detection of fluorescence in the system setup in Malin, based on the teaching of the combination of Malin and Hamashima that detection of fluorescence and detection of scattering should be performed in two different systems.

In addition, Applicant respectfully submits that the combination of Malin and Hamashima still fails to teach “at least one beam-splitter being arranged to reflect the first light beam towards the specimen and filter light emitted from the specimen, thereby allowing fluorescent light from the marked objects to pass through the beam-splitter to the detector” as recited in claim 1, and “filtering through said beam-splitter light emitted from the specimen, passing fluorescent light from the marked objects through the beam-splitter towards the detector” as recited in claim 29.

In particular, the Examiner has correctly acknowledged that Malin fails to teach that the beam-splitter can filter the light from the fluorescent marked object. Therefore, Malin also fails to teach “at least one beam-splitter being arranged to reflect the first light beam towards the specimen and filter light emitted from the specimen, thereby allowing fluorescent light from the marked objects to pass through the beam-splitter to the detector” as recited in claim 1, and “filtering through said beam-splitter light emitted from the specimen, passing fluorescent light from the marked objects through the beam-splitter towards the detector” as recited in claim 29.

Hamashima also fails to cure the deficiencies of Malin. As shown in Fig. 1 of Hamashima, the light source 62 emits light towards the sample and is reflected twice, by the mirror 54 and the beam-splitter 52. In addition, any fluorescent light is to be detected by photo detector 60. This is accomplished by reflecting the light from the sample by the beam splitter 52 and the mirror 56 and further *filtering the fluorescent light by the filter 58*. Accordingly, the fluorescent light from the sample is reflected by the beam splitter 52, but is not filtered by the beam splitter 52. The fluorescent light is simply filtered by the filter 58, not by the beam splitter 52. Therefore, Hamashima fails to teach “at least one beam-splitter being arranged to reflect the

first light beam towards the specimen and filter light emitted from the specimen, thereby *allowing fluorescent light from the marked objects to pass through the beam-splitter to the detector*” as recited in claim 1, and “filtering through said beam-splitter light emitted from the specimen, *passing fluorescent light from the marked objects through the beam-splitter* towards the detector” as recited in claim 29.

With regard to the Examiner’s reliance on Worster and Raz, these references have only been relied on for their teachings related to some dependent claims. These references also fail to disclose the above combinations of elements and steps as set forth in amended independent claims 1 and 29. Accordingly, these references fail to cure the deficiencies of Malin.

Accordingly, none of the references utilized by the Examiner individually or in combination teach or suggest the limitations of amended independent claims 1 and 29 or their dependent claims. Therefore, Applicant respectfully submits that claims 1 and 29 and their dependent claims clearly define over the teachings of the references relied on by the Examiner.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Cheng-Kang (Greg) Hsu, Registration No. 61,007 at (703) 205-8000 in the Washington, D.C. area to conduct an interview in an effort to expedite prosecution in connection with the present application.

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Reply to Office Action of February 5, 2008

Docket No.: 2836-0153PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

Paul C. Lewis
Registration No.: 43,368
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant
